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October 18, 1999

David S. Guzy, Chief
Rules and Publications Staff
Minerals Management Service
Royalty Management Program
P.O. Box 25165
MS 3021
Denver, Colorado 80225

Re: Advance Notice of Proposed Rulemaking – Geothermal Royalties

Dear Mr. Guzy:

On August 19, 1999, the Minerals Management Service ("MMS") published an Advance Notice of Proposed Rulemaking ("ANPR") raising questions about the need to amend its regulations regarding the valuation for royalty purposes of federal geothermal resources used to generate electricity. 64 Fed. Reg. 45213-15 (1999). The purpose of the ANPR is to solicit views on whether such amendments should be undertaken and, if so, what issues should be addressed.

This response to the ANPR is submitted by the Geothermal Energy Association ("GEA"). The GEA is the trade association for producers and operators in the geothermal energy industry, representing some 80 companies in the industry, including major producers such as Calpine Corporation, Caithness Corporation, FPL Energy, Inc., MidAmerican Energy Holdings and Oxbow Power Services, Inc. GEA members are directly affected by the issues addressed in the ANPR, and we will participate vigorously in all aspects of the MMS consideration of changing the geothermal royalty regulations.

INTRODUCTION

Before addressing the merits of the issues presented in the ANPR, GEA makes two general statements regarding: 1) GEA's involvement in the ANPR review; and 2) the need for an extension of the comment period on the ANPR.

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GEA Involvement. As stated at the October 7 MMS workshop on this issue, GEA is committed to participating constructively and fully on the issues raised by the ANPR. We support the legal and policy objectives of ensuring that the public receives a fair return for resources extracted from federal lands. This was the spirit in which the industry participated in the rulemaking that led to the existing regulations, and it is the principle that guides geothermal operators to maintain compliance with those standards today.

Although GEA will participate constructively in this process, the issues raised by the ANPR are quite complex. We are concerned that the sudden decision to undertake the rulemaking on defining new methodologies somehow implies that the agency has already concluded that the existing regulations have failed, in general, to provide a fair return and therefore require modification. Some of the views expressed in presentations by agency officials at the October 7th workshop only confirmed this concern, which was raised originally by the result-oriented and conclusory language of the ANPR. We sincerely hope that our concerns about predetermination are without basis, because GEA strongly believes that the reasons stated in the ANPR for reconsideration of the regulations must be thoroughly reviewed to determine if there is any substantive basis for change.

It also is clear that, under the Administrative Procedure Act, MMS is obligated to conduct an open and objective consideration of views and not enter the process with a predetermined position. See Walter O. Boswell Mem'l Hosp. v. Heckler, 749 F.2d 788, 797 (D.C. Cir. 1984) (In informal rulemaking, agency must consider reasonably obvious alternatives and explain its reasons for rejecting the alternatives.); International Ladies Garment Workers' Union v. Donovan, 722 F.2d 795, 815 (D.C. Cir. 1983) (Agency must consider alternatives in rulemaking.). Only after such a review should MMS reach any conclusion about the adequacy of the existing regulations. It is our position that neither statements in the ANPR, nor a one day workshop just prior to the comment deadline, provide an adequate basis for reaching such conclusions. Such an opportunity has not been provided by the current process.

Extension of Comment Period. At the outset, the GEA expresses its strong view that MMS must provide an adequate opportunity for public response to the ANPR.

At the October 7 workshop, MMS presented for the first time information regarding the alternative methodologies under consideration (only 11 days before the end of the comment period). That information was made available in a cursory generalized manner, without adequate explanation as to how the conclusions

presented were reached. The data, assumptions, and calculations associated with the MMS conclusions on the methodologies also were not made available. MMS staff cited the importance of this data but could not, or did not, produce it for the review of the public or those in the regulated community who must comment on the ANPR. Requests for that supporting documentation have not been responded to. Thus, a full and fair dialogue on the key issues presented by the ANPR has not occurred, essentially undermining the very purpose of the agency's request for comments in order to determine if a rulemaking proposal is warranted.

In addition to failing to provide adequate information for review, the premature closure of this comment period has made it difficult for affected GEA members to explore potential resolutions to the concerns about local government revenues which are ostensibly behind the ANPR. It became clear to GEA members in attendance at the workshop that there may be ways to develop a valuation method that would better meet the concerns of local communities for less volatility in their payments, while remaining fair to royalty payors. In particular, GEA believes that it would be useful for MMS, the industry, and state and local governments to undertake discussions and analyses to explore options prior to the creation of fixed positions in a formal rulemaking. However, no such options can be considered without a more complete disclosure and understanding of MMS' analysis and without a serious opportunity for a full and open consultation. By closing the comment period, MMS makes such discussions much more difficult, and invites an adversarial situation. In addition to any limitations MMS may impose on its own participation in such discussions after the comment period has closed, an additional time burden results once the agency begins to move toward proposed rulemaking. These are all counterproductive steps that will actually make it more difficult to address issues that may lead to a consensus solution. We believe all parties should analyze alternatives with an open mind, rather than focusing on a proposed rule designed to achieve a largely predetermined outcome. As a result of all these factors, GEA requests that MMS: reopen the ANPR comment period, share its data and analysis, and plan a further workshop based on a more complete set of information. Such a process will facilitate an open exchange of views and proposed solutions, and ultimately shorten the course to a balanced solution on valuation.

TREATMENT OF ROYALTIES UNDER THE GEOTHERMAL STEAM ACT

Any reconsideration of the royalty formula for geothermal resources must start with the authorizing statute, the Geothermal Steam Act ("GSA") 30 U.S.C. §§ 1001-1025.

Enacted in 1970, the GSA grants authority to the Secretary of the Interior to issue leases for geothermal development on specified public lands. *Id.* § 1002. The stated purpose of the GSA is to "open to exploration and development, through private enterprise, the geothermal steam and associated geothermal resources underlying certain of the public domain lands of the United States." S. Rep. No. 1160, 91st Cong., 2d Sess. 1 (1970). As stated in 1970 by the Senate Committee on Interior and Insular Affairs, "[t]he Nation's geothermal resources promise to be a relatively pollution-free source of energy, and their development should be encouraged." *Id.* at 3.

Although geothermal resources, like other resources extracted from federally owned public lands, must produce a fair economic return to the United States, the royalty requirements of the GSA are tied closely to the policy goal of encouraging private development of geothermal resources on public lands. The royalty rate must be at least 10% (and no more than 15%) of the value of the geothermal heat or energy derived from production under the lease. 30 U.S.C. § 1004(a). In adopting the 10% minimum royalty, Congress recognized the need to grant greater incentives to private geothermal developers, who must use capital-intensive, innovative technology in remote regions of the country, than are granted to the developers of conventional energy resources such as oil and gas.¹ H.R. Rep. No. 1544, 91st Cong., 2d Sess. 7 (1970). Consistent with this statement of congressional intent, MMS applies the 10% minimum royalty to liquid-dominated geothermal leases.

The central issue addressed in the ANPR is how to determine the "value" of the resource against which the 10% royalty shall be charged. It is the GEA's view that the

¹ Indeed, there was strong feeling at the time the GSA was enacted that 10% was too high. For example, Congressman Hosmer stated that, "I am fairly certain that at some later time we will have to amend this legislation to permit a lower minimum royalty than that specified in the legislation as amended. . . . There are probably a lot of areas where the economics of geothermal steam production with very dirty steam are submarginal at a 10 percent royalty rate." 116 Cong. Rec. H41, 757 (daily ed. Dec. 9, 1970).

same energy policy objectives that apply to the establishment of the 10% minimum rate also apply, within the constraints of applicable law, to the calculation of the value against which that rate is applied.

No specific guidance is provided in the GSA as to how a fair return is defined. The legislative history of the Act, however, establishes several objectives which are specific to the geothermal resource. These objectives are to be satisfied in the course of ensuring that the United States defines a fair return on geothermal resources. These objectives are:

- 1) Geothermal producers and investors should be given a clear indication of how royalties will be calculated so that private industry understands the economic factors and risks involved in geothermal utilization. S. Rep. No. 1160, at 7, 9.
- 2) The valuation standards should reflect that a "fundamental purpose" of the GSA is to provide "investment incentives." Id. at 7.
- 3) "[P]rompt and vigorous development" of geothermal resources is in the public interest, and "royalties are a major consideration in planning and obtaining financial commitments for the development of such [geothermal] facilities." Id. at 9.
- 4) In the long-run, benefits to the United States will be maximized if greater use is made of geothermal resources. Id. at 9, 10.
- 5) Costs to developers will be high, and the GSA is intended "to give as much encouragement as possible to potential developers." Id. at 10. MMS (and each agency administering the GSA) is directed to "keep this basic purpose in mind."
- 6) There is an important distinction between geothermal development and oil and gas development. H.R. Rep. No. 1544, at 9.

As recognized by these references to the legislative history of the GSA, there is a clear relationship between the royalty valuation approach adopted by MMS and the fulfillment of other federal environmental and energy security objectives. See, e.g., S. Rep. No. 1160, at 9. These principles have guided past MMS actions on geothermal royalty valuation policy determinations and they must continue to govern the response to the ANPR.

These statements of Congressional intent point to clear and definitive policy choices for MMS. In setting royalty valuation rates, no action should be taken that would significantly disadvantage the geothermal industry. That objective is as compelling today as it was in 1970. Geothermal continues to represent a reliable, environmentally acceptable source of renewable energy. In an increasingly deregulated market, it also represents welcome diversity of energy source, as well. In 1970, Congress stated that the failure to develop sources of geothermal energy "will create an increased claim on other resources, higher pollution, adverse environmental effects and higher costs." H.R. Rep. No. 1544, at 20. The State of California has expressed the same policy goal, stating:

[I]t is also the policy of the state to encourage the use of . . . geothermal resources . . . wherever feasible, recognizing that such use has the potential of providing direct economic benefit to the public, while helping to conserve limited fossil fuel resources and promoting air cleanliness.

Cal. Pub. Res. Code § 800.

MMS, however, appears to have forgotten completely these policy objectives in initiating the ANPR. Nowhere in the ANPR, and at no point during the workshop, was any mention whatever made of, or concern shown for, these established energy policy objectives. The many public benefits of geothermal energy do not appear to be receiving any consideration. Nor does MMS seem to be heeding the admonition of Congress that royalty rates should purposely be set to encourage the development of geothermal energy, much less avoid proposals which will discourage it. If MMS is to undertake a meaningful, valid, and appropriate review of geothermal royalty valuation methodologies, it must apply these fundamental principles to guide its actions.

As GEA has stated, it is sensitive to the effect of its royalty payments on federal, state, and local governments. It is reasonable to consider these effects, and geothermal operators are willing to assist in that process. Nevertheless, the fact remains that neither the GSA, nor its legislative history, assign priority value to these specific interests, which are categorically not the same as the concept of a "fair return." To the contrary, the clear policy direction given to MMS by the law is to achieve a fair return, and to set royalties so as to promote geothermal resource utilization over other desirable end results, such as levelized government revenues. Such a result might better be accomplished by preserving the existing system which is based on netback, but with the flexibility to utilize other methods, such as rate of return, where such an approach is better suited to a specific project.

GEA believes that it is possible to accomplish both sets of objectives. However, such a result will not be achieved if MMS rushes forward to a proposed rulemaking without engaging in further public review or participating with other affected parties in a truly meaningful dialogue, based on analysis, concerning the effects of various methodologies.

For compelling reasons that an MMS "rush to judgment" on a new valuation rule is inappropriate, we need look no further than the words and conclusions of the Agency itself as it adopted the current valuation rule in 1991.

The MMS now appears to find the netback method to be flawed, but in 1991, with respect to the **netback approach** MMS stated as follows:

The netback approach is a recognized method of deriving the value of mineral resources for royalty purposes. The MMS disagrees that the netback procedure is conceptually inappropriate for valuing geothermal resources used to generate electricity.

Under the netback procedure the value of the geothermal resources (thermal energy) is determined by subtracting the costs of generating and transmitting electricity from the revenue received for the sale of the electricity (that is, the value of the electricity). *Thus, the resource value tracks the value of the converted form of energy (electricity) derived from the use of the resource.* 56 Fed. Reg. 57260.

MMS now appears to favor a **rate of return method** to calculate royalties, but in 1991, in rejecting industry suggestions to consider such an alternative, MMS said:

The MMS does not view the proportion-of-profits method as an accurate determinant of capital cost because it reflects a company's profitability rather than the industry's cost of capital. Also, as previously stated, MMS does not find compelling the argument that the rate of return on investment attributable to resource development must be the same as that attributable to other components of the geothermal project. In addition, MMS is not comfortable using a different rate of return for each project. 56 Fed. Reg. 57266.

MMS now questions the rate of return in the netback formula. But in 1991, MMS said:

In previous product valuation rulemakings (for example, oil and gas valuation rulemakings a 53 F.R. and 1262, January 15, 1998), MMS determined the rate of return on depreciable capital investments should be closely associated with the cost of money necessary for construction of transportation and processing facilities. The MMS concluded that a corporate bond rate adequately considered the risks involved in such ventures and believed that the Standard & Poor's industrial BBB bond rate represented a rational choice among the available alternatives. This conclusion was viewed primarily in terms of long term debt. The impact of equity financing was unknown. During the mid-1980's (1983 to 1987), the Standard & Poor's industrial BBB bond rate ranged from a low of about 9.5% to a high of about 15%; the average was about 12%, which is correlative with the interest rates on long term debt reported in the geothermal industry's comments. However, considering that equity financing may account for 50% or more of the capital invested in the power plant and transmission line, and that the return on equity may be as high as 40%, the weighted average cost of capital to finance geothermal power projects is *easily greater than a straight corporate bond rate*. For example, half of a project was financed by equity investment at an expected rate of return of 40% and the remaining half by long term debt at an interest rate of 12%, the total cost financing the project would be about 26%. This amount, as well as the weighted average rates of return calculated by the industry comments, is within the range of Standard & Poor's industrial BBB bond rates increased by a factor of 2. *The MMS finds that a rate of return 2 x Standard & Poor's industrial BBB bond rate is a reasonable representative cost of capital for financing geothermal power projects; this rate of return therefor is adopted in the final rule for us in determining transmission line and generating cost rates under the netback procedure.* 56 Fed. Reg. 57266 (emphasis added).

In short, the MMS should heed its own words and decisions. Doing so may convince the agency to not jettison its own conclusions in a hurry-up rulemaking after several successful years of valuation under current rules. The option of further pre-rulemaking analysis and discussion remains available to MMS, and GEA strongly recommends that it be fully taken advantage of before proceeding with a proposed rulemaking. In the long run, such an approach is likely to save time and avoid conflict by creating the opportunity for a consensus solution as opposed to a protracted and contentious rulemaking proceeding.

THE EFFECT OF ROYALTY RATES ON GEOTHERMAL UTILIZATION

MMS must understand that royalty rates continue to have a very significant effect on geothermal resource use. If geothermal development is to be maintained, and encouraged to grow to its full potential, MMS and other agencies responsible for implementing the GSA must recognize the unique characteristics of this industry. Unlike oil and gas, geothermal steam cannot be pumped into a tank truck and transported to the nearest market. Instead, it must be utilized at the site of production. This requirement introduces numerous special considerations into the development of geothermal resources. In the remote locations where virtually all geothermal facilities are located, there is usually no power plant to which the lessee can sell the resource. Consequently, to market the resource, the lessee must undertake the risk and expense of constructing a generating plant and installing a transmission line. The costs of doing so are substantial. Because of the risks involved, financing for geothermal projects is both more expensive and more difficult to obtain than financing for conventional energy projects. In addition, because geothermal extraction and the associated energy production require state-of-the-art technology, capital costs are very high.

It is not true that a deregulated market or what MMS calls the absence of "incentive pricing" has so altered the structure of this industry that the unique difficulties of geothermal production no longer give rise to challenging economic factors for GEA members. Indeed, the costs and risks of geothermal energy production remain substantial. It is worth noting, for example, that the only new geothermal power plants likely to come on line in the next few years are those that have received incentive awards under AB1890, the State of California's restructuring legislation. The market confirms that the risk is still substantial and that, without incentives, new geothermal capacity is unlikely to come on line.

Any decision on a proposed revision of the current geothermal valuation regulations should be predicated on a thorough analysis of the effect of electric utility deregulation in California and Nevada on the geothermal industry. The ANPR offers no such analysis, nor did the MMS "workshop." Overall, the general effect of deregulation has been to increase competition for electricity sales, and generally lower the price of electricity. Renewables are facing difficult times in these newly restructured markets. According to Richard Cowart of the Regulatory Assistance Project, since the advent of utility restructuring, renewable electricity production has

declined 25% (Testimony of Richard H. Cowart before the Subcommittee on Energy and Power, U.S. House of Representatives, October 6 , 1999, page 7).

The effect of this phenomenon on the geothermal industry, in particular, should be analyzed before any formal rulemaking is initiated with the apparent goal of simply increasing the government take from geothermal projects. The fact that progress has been made toward achieving the intended result of deregulation should not result in punitive royalty provisions being applied, particularly to a renewable energy industry that is now undergoing significant restructuring and consolidation. The public policy objectives of energy deregulation, as well as a fair return from public resources (and other income and property tax payments), should all be analyzed in the same context.

MMS is simply wrong in stating that incentive pricing is no longer a factor. Incentive pricing has not been abandoned. As pointed out previously, virtually all of the new renewable power coming on line in California is expected to be supported by financial incentives provided under California restructuring legislation. Thus, bringing new geothermal resources into use will be subject to much the same consideration that has supported the use of the current royalty valuation methodology. Raising royalty rates will almost certainly have the effect of discouraging new investments in geothermal energy production, undermining one of the key principles of the GSA.

Changing the valuation methodology to produce higher revenues also will have a serious negative effect on existing projects. If royalty payments are dropping dramatically under netback, it is axiomatic that the net profits of the geothermal project involved are also declining dramatically. In newly deregulated markets where geothermal producers have seen busbar energy prices drop by as much as 80% in the past few years, it is fair to assume that at least some operators are at the margin, and an increase in royalties could push them further towards becoming uneconomic. At the minimum, this relationship should be fully explored and understood before proceeding with a rulemaking to abandon the netback methodology.

NEED TO CONSIDER MULTIPLE FACTORS

Reconsideration of royalty valuation methodology is a complex matter. It is nowhere as simple as suggested in the ANPR, where the principle considerations appear to be nothing more than determining whether netback is suitable and looking for a way to increase and levelize government revenues. If the review undertaken pursuant to the ANPR is to be valid and meaningful, MMS needs to consider the multi-faceted nature of the issue involved.

Although not stated explicitly, there is some implication in the ANPR that "fairness" may be measured solely as any decrease in the governmental revenues which are received as royalties. In fact, fairness consists of numerous factors. One such factor MMS must consider is the total financial obligation of a geothermal producer to the government, including not only royalty payments but also income tax payments, and in the case of local revenues, the property tax burden which is borne by the capital structure of a project. A recent report by the National Renewable Energy Laboratory indicates that new geothermal plants would pay nearly twice as much to the federal government in royalty and income tax payments as a comparable natural gas power plant. Nearly all of this "very large difference in Federal revenues between geothermal and natural-gas generation lies in the income tax, not in the royalties," the study concluded. See Entingh Review of Federal Geothermal Royalties and Taxes, Princeton Economic Research, Inc., under Subcontract to the National Renewable Energy Laboratory, at 21. Also, property taxes are an important source of income to local governments, and geothermal facilities pay significant local property taxes. For example, we believe that geothermal facilities are among the top taxpayers in Inyo and Imperial Counties, California.

Another factor is the net revenues from production under current or foreseeable economic circumstances, which is essentially a question of variability. As the Northern California Power Agency ("NCPA") workshop demonstrated, electricity prices in California are expected to rise in the immediate future. An examination of futures contracts shows that it is likely that the decline in royalty payments under netback is already reversing, and the local governments will see significant increases in payments in the months immediately ahead.

A third factor to assess is the comparison with the royalty and other obligations placed on the production of other resources, such as natural gas "and oil." As NCPA has pointed out, in MMS' own publications it stated that despite a much higher market value, federal oil production in California paid less royalties to the state than geothermal energy.

Yet another factor to consider is the nonrevenue-based benefits of the technology involved (i.e., geothermal includes renewable resource and a nonpolluting, technologically-advanced industry). California has some of the cleanest air in the nation, in part because nearly 50% of its electricity is generated from renewable resources (including hydropower). That translates into immediate benefits to the state in reduced health impacts. According to a recent report, "compelling evidence exists that air pollution – legal air pollution – still kills and sickens millions of Americans.

Motor vehicles and powerplants release the vast majority of that pollution." See Moore, *Dying Needlessly: Sickness and Death Due to Energy-Related Air Pollution*, at 17, Renewable Energy Policy Project, Washington, D.C., (1997).

A fifth factor to address is that the California Energy Commission has acknowledged, at various times, that renewable energy industries are important to the State's export outlook and future economic health given that renewable technologies – including geothermal energy – are among the fastest growing energy technologies worldwide.

Finally, MMS must consider the employment and infrastructure benefits resulting from the development of geothermal plants. Geothermal facilities provide significant employment in California. One estimate is that the industry provides direct and supporting employment to 10,000 citizens. Many of these jobs are in rural areas with high unemployment rates.

MMS cannot, and should not, proceed with its reconsideration of royalty valuation approaches without addressing each of these significant issues.

THE NETBACK APPROACH

The ANPR characterizes the existing valuation regulations in too narrow a fashion, treating them almost exclusively as demanding use of the so-called "netback" methodology. The current regulations provide for, and allow the use of, the netback methodology as MMS' principal valuation methodology. Other approaches can be used when an alternative method better suits the particular circumstances of a project. See, e.g., 30 C.F.R. § 202.352(c)(1)(iii). Netback is the preferred method for non-arm's length transactions, as the choice of MMS itself during the rulemaking which led to the 1991 rules. At that time, there was substantial industry testimony concerning alternative methodologies, but it was MMS that adopted and insisted upon maintaining netback as the first choice "no sale" valuation method.

In light of this preference for netback, a fact reaffirmed by considering the vigorous defense of this formula by MMS in 1991 (see, e.g., 56 Fed. Reg. 57260-61), it is curious that the agency now appears to be so willing to look for other options, and without significant analysis available to the public, to substitute another approach. When MMS adopted netback, it did so on the theory that it was an accurate and reliable methodology that would have long-term applicability. As MMS stated, "the values derived by the netback procedure are reasonable in view of actual industry practice." Id. at 57260. See also id. at 57261. No information or analysis has been

offered by MMS to explain why this is no longer this case. For the record, the geothermal industry did not support netback in 1991. The reasons are summarized in the preamble to the 1991 regulations. 56 Fed. Reg. 57260-262. However, GEA members have come to accept this methodology, due in part to some of the common sense, reasonable variables adopted, such as the rate of return (2 x BBB bond rate) and deduction limitations. These variables were sufficiently sensitive to the unique features of the geothermal industry, and they compensated for other concerns about netback.

It also should be acknowledged that netback continues to offer the important advantage of being market-based. In the new dynamic markets, market-based formulas have to yield more dynamic returns. At the moment, however, with low prices in the market, such a formula may provide reduced returns. However, in a higher priced market the federal royalties may increase over what they would be under other methods. This type of formula has the advantage of placing the least burden upon producers in the market downturns, while extracting greater returns during market upturns. If MMS adopts other methods, it may be laying the groundwork for future criticism that it failed to collect adequate royalties when electricity prices rise. If MMS believes netback no longer works, then it should consider establishing the opportunity to use any of the various methods based on the facts of a particular case. Although this principle is reflected in the existing regulations, greater flexibility could be provided in the future to tailor royalty methodology to the facts of a specific project.

On balance, netback has proven to be a workable, reasonable, and fair valuation methodology. But this is true only based on existing variables incorporated in the formula. If new variables are used, a careful analysis first must be undertaken, to assess impacts on a variety of lessees and revenue recipients under different market conditions.

THE RATE OF RETURN

MMS has asked for comments on the rate of return (2 x Standard & Poor's BBB) used in the existing regulations. GEA is aware of no justification to change this rate. To the contrary, GEA believes that all of the factors that justified the choice of this rate of return remain valid and preclude a rational basis for change. In 1991, MMS specifically rejected a rate of return below 2 x BBB because "that [lower] rate of return... does not adequately account for the return on investments required for geothermal projects." *Id.* at 57262. Instead, after recognizing that "geothermal powerplant operations may contain a certain element of risk" and "present relatively

greater financing costs than a conventionally funded powerplant," MMS determined that 2 x BBB "in a reasonable representative cost of capital for financing geothermal power projects." Id. at 57265. There have been no significant changes in the industry that offer a reason to depart from the standard. The same holds true for deduction limits.

ALTERNATIVE METHODOLOGIES

GEA cannot offer detailed responses to this alternative method suggested in the ANPR. This is because MMS has failed to provide enough information or analysis to permit reasonable response. The October 7 workshop illustrated this problem, where agency officials essentially repeated the same conclusions asserted in the ANPR and some summary information about alternatives, but gave little or no underlying data or analysis. Until such data or analysis is available, detailed comment is not possible and rulemaking is premature. At the workshop, participants asked the BLM and MMS officials who were present whether they had comparable modeling runs of the different methodologies being considered that would show what would happen to royalty revenues under different projections of future electricity prices. The officials said that they had not done such an analysis, but could produce it in the future.

It is also notable that the presentation that was made on the "Rate of Return" methodology – which appeared to be a predetermined, preferred option – showed that at current electricity prices, the rate of return on geothermal energy production would be negative. In effect, the only analysis presented at the workshop by either BLM or MMS undermined the very rationale for the ANPR by demonstrating that the extreme drop in the price of wholesale electricity – not some nuance of the regulations – is behind the reduction in royalty payments. With geothermal producers facing as much as an 80% drop in the price of their electricity, it is unreasonable not to expect the value of the steam to decline commensurately. It is unfair and contrary to the GSA to try to remedy this situation for local governments by imposing new taxes on the geothermal power industry through amendments to the royalty regulations.

NEED TO FULLY ANALYZE THE CAUSE OF IMPACTS TO LOCAL GOVERNMENTS

The ANPR alleges, in what is suggested to be a direct cause and effect relationship, that "application of the netback methodology" has resulted in dramatically decreased revenues for local governments. The implication is that the mere use of the netback methodology under the 1991 rules is the casual factor for lower local revenues. The questions are: Has the MMS fully explored and analyzed

the combination of factors that allowed the netback methodology to work satisfactorily for a number of years, but now results in calculations that have lead to diminished royalty revenues? What other factors (including the effect of deregulation of the California Energy market) are involved, as opposed to the isolated factors related to netback? And, even if the royalties paid are resulting in lower revenues, are they nonetheless a fair and accurate assessment of value? After all, the test for a reasonable royalty formula is how accurately it measures the worth of the resource. These questions should be the primary focus of the ANPR review.

Geothermal energy facilities provide numerous benefits to local communities. Often they are located in rural areas, and provide significant jobs, economic development stimulus, and property tax and other revenues to the local area. In addition, geothermal facilities provide environmental benefits, including cleaner air and water, compared to the traditional mix of generating options. Recognition of the public health and other benefits to local, state and national economies has resulted in making the expanded production of geothermal energy a federal and state public policy objective. The effort of any loss of revenue to local economies cannot, and should not, be considered in isolation of the full range of benefits bestowed by geothermal operations.

CONCLUSION

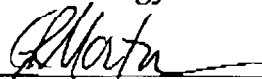
In enacting the GSA, Congress stated:

[T]he committee seriously questions the wisdom of placing undue emphasis at this time on rentals and royalties from geothermal leases as a source of Federal revenue. The emphasis must now be to establish a climate favorable to the development of the resource. Looking to the future, the tax revenue.... from a vigorous, prosperous geothermal power industry producing low-cost, pollution-free energy will far exceed any present return for lease rentals and royalties.

S. Rep. No. 1160, at 9 (1970). In fact, what Congress concluded thirty years ago remains valid and on point – if the industry can be established and maintained, it will provide a range of benefits which far surpass the singular value of royalty return from use of the resource. In short, royalties should be set "to encourage the development of geothermal resources " *Id.* at 7 (emphasis on original).

In submitting these comments, GEA does not request special consideration or extra incentives, even though Congress has made it clear that such treatment is justified. Instead, the unified industry group requests only that disincentives not be built into MMS' geothermal royalty valuation approach, to change that approach or that a rulemaking be precipitously undertaken without data or analysis to support it. By definition, the "value" of geothermal resources should reflect their true worth relative to the costs of their development. The existing regulations work reasonably well for this purpose. MMS should not propose changes without first exploring, in an open and cooperative manner, alternative solutions to address the issues raised by critics of the current approach. The GEA will participate in good faith in such a review.

Respectfully submitted on Behalf of the
Geothermal Energy Association by

by 

Karl Gawell, Executive Director

Guy Martin, Perkins Coie

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RECEPTION-JOURNAL

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642	AUG. 30	14:44	00/00	0	87037871546		P NG 33
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647	SEP. 09	17:32	01/09	3	303 275 7347	EC	M OK
648	SEP. 12	08:09	00/54	1		G3	M OK
649	SEP. 14	02:20	00/47	1	510 317 2000	EC	M OK
650	SEP. 14	16:22	02/07	3		EC	M OK
651	SEP. 15	15:18	00/45	2		EC	M OK
652	SEP. 15	22:19	00/48	1		G3	M OK
653	SEP. 21	01:01	00/47	1	510 317 2068	EC	M OK
654	SEP. 21	11:31	00/56	2	303 232 1213	EC	M OK
655	SEP. 21	14:28	00/32	1	703 736 7329	EC	M OK
656	SEP. 22	06:48	00/46	2	202 208 3982	EX	M OK
657	SEP. 22	07:02	01/01	3	202 208 3982	EX	M OK
658	SEP. 22	16:43	00/55	1		G3	M OK
659	SEP. 23	11:17	02/09	3	1 541 574 3140	EC	M OK
660	SEP. 28	03:42	00/47	1	510 317 2068	EC	M OK
661	SEP. 28	15:47	17/40	19	3032364810	EC	M OK
662	OCT. 04	15:33	00/37	2	202 208 3982	EX	M OK
663	OCT. 05	10:01	00/44	1		G3	M OK
664	OCT. 05	16:48	04/30	3	3032757470	EC	M OK
665	OCT. 05	16:53	01/36	3	3032757470	EC	M OK
666	OCT. 06	10:39	00/37	1	V F	EC	M OK
667	OCT. 08	16:31	00/38	1		G3	M OK
668	OCT. 12	13:26	00/44	1	303 982 2601	EC	M OK
669	OCT. 13	09:54	00/53	2	3032757303	EC	M OK
670	OCT. 13	13:49	00/30	1	123-4567	G3	M OK
671	OCT. 14	09:06	01/34	6	7195352038	EC	M OK
672	OCT. 14	09:33	00/33	1	303 275 7227	EC	M OK
673	OCT. 15	07:22	00/41	1		G3	M OK
674	OCT. 15	11:17	00/59	2	530 868 5239	EC	M OK
675	OCT. 15	16:33	02/07	4	916 781 4252	EC	M OK
676	OCT. 15	17:05	02/06	3	9167582839	G3	M OK
677	OCT. 18	13:19	09/47	14	707 263 2207	EC	M OK
678	OCT. 18	14:07	01/07	2	801 297 4799	EC	M OK
679	OCT. 18	14:37	02/45	3		EC	M OK
680	OCT. 18	15:30	06/30	17	202 434 1690	EC	M OK